

AMENDMENTS TO THE SPECIFICATION

*The paragraph on page 3, beginning at line 19, has been amended as follows:*

In the subject method of fabrication of the substrate, a number of LTCC tape layers are initially divided into multiple stacks of tape layers, e.g., four stacks or sections, based on a final cavity routing configuration of each stack. One of the stacks comprises a set of layers for the formation of a ceramic ring frame. Each stack is then separately tack laminated, followed by cavity patterns being machined therein using a router device whereby a large number of layers are routed in a single pass, forming cavities having side walls which are relatively smooth and straight as opposed to the known prior art method of cutting individual layers with a laser, for example, which results in the formation of jagged side walls. Following cavity routing, all of the stacks are laid up on a base plate including a set of tooling pins for providing alignment of the stacks. The lay up is completed with a placement of a top ~~mylar~~Mylar template followed by a copper template. The assembly is next covered with an expandable latex sheet that has been lightly coated with a graphite aerosol for aiding the removal of the latex sheet without metal lift-off after lamination. The assembly is then placed in a lamination fixture and isostatically laminated for a specific period of time at a predetermined pressure and temperature, typically 4000-5000 psi at 72°C for 15 minutes, resulting in a structure in the form of laminated panel. The panel is then allowed to cool, removed from the fixture where it is green cut to remove tooling holes and then fired with a designated firing profile. A plurality of

mutually identical LTCC substrates for a T/R module are then diced, i.e. cut, from the panel and post fire printed as required.

*The paragraph on page 6, beginning at line 18, has been amended as follows:*

Referring now to Figure 2 which discloses the preferred method of the subject invention, the process steps up to conductor printing and including of blanking the green tape, punching the vias, filling the via holes and screen printing, as shown in steps 200-206, are the same as shown in the prior art process of Figure 1. Now, however, following an inspection step as shown by reference number 208, a plurality of, for example, forty seven tape layers (H01-H47) for the simultaneous fabrication of plurality of identical T/R module substrates, one of which is shown, for example, in Figures 4 and 5 by reference numeral 20, are divided and stacked into four sections 10, 12, 14, 16 as shown by steps 210, 212, 214 and 216. Section 10 is comprised of a stack of five layers H01-H05, the second section 12 is comprised of a stack of ~~12~~twelve layers H06-H18, the third section 14 is comprised of a stack of four layers H19-H22, and the fourth section 16 is comprised of a relatively thick stack of twenty four tape layers, H23-H47, the latter section comprising a stack of tape layers which is used for the formation of a ceramic ring frame. The four tape sections 10, 12, 14 and 16 are separately tack laminated at a pressure of 1000-2000 psi as shown by steps 218, 220, 222 and 224. Specific cavity patterns are next machined in the four individual laminated tape sections 10-16, as shown in Figure 3 by reference

numeral 18 by routing using a DNC (direct numerical control) router as shown by steps 226, 228, 230 and 232.

*The paragraph on page 7, beginning at line 18, has been amended as follows:*

After cavity routing and cleaning of the four laminated tape sections 10, 12, 14 and 16 as shown by steps 226, 228, 230 and 232 of Figure 2, the four sections are stacked on a copper base plate, not shown, which includes tooling pins per step 234 for providing an alignment mechanism. The four section stack of LTCC tape is next covered with a green expandable "Stretchlon SL 200" (TM) latex sheet, not shown, that has been lightly coated with a graphite aerosol to facilitate the removal of the latex sheet without metal lifting off after lamination. The assembly is then placed in a well known lamination fixture and isostatically laminated at 4000-5000 psi, at 72° C. for 15 minutes. This lamination step results in a composite multi-layer panel 20 of a plurality of individual substrate parts ~~20~~, one of which is shown in Figures 4 and 5. The panel is then taken out of the fixture after it is allowed to cool, where it is green cut as shown in step 236 to remove tooling holes and fired with a designated firing profile as shown by step 238. Parts comprising a substrate of a T/R module package are then diced, cleaned and post fire printed, as required in a conventional manner as shown by steps 240, 242 and 244 to provide individual substrates 20.